

**Abstract:**

[0080] The Flexible Message Header (FMH) is a typed modular message structure comprising one or more Typed Container Modules (TCM) - stateful message modules with a compact header (Typed Container Header, TCH), a user definable payload (Typed Container Body, TCB), and a set of payload-specific callback to handle the lifecycle of the module at the different state such as creation, preparation, manipulation, resizing, transferring, and deletion. A single message comprises a small header with various numbers of TCMs. The integrity of the entire message is not affected by dynamically modifying, adding or removing TCM from the message. Major message content change can be achieved by either adding a TCM or swapping the TCM with different TCM. Minor message content change can be achieved by either modifying or expanding the TCM directly within the message. New features can be supported by adding new TCM and new code to process the new TCM.